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EXAMINER

NELSON, MICHAEL B

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/578,231 | <b>Applicant(s)</b><br>HUSEMANN ET AL. |  |
|                              | <b>Examiner</b><br>MICHAEL B. NELSON | <b>Art Unit</b><br>1794                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/11/09 has been entered. Claims 1-8 are currently under examination on the merits.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite "heat-activable" which is vague and indefinite in that it is unclear if the activity that the heat is meant to start is the setting of the adhesive (i.e. thermosetting) or if the heating of the polymer is only meant to melt the polymer but not set it.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feichtmeier et al. (U.S. 6,350,791), and further in view of Kelch et al. (U.S. 2002/0068182).

Regarding claim 1, Feichtmeier et al. discloses a thermosettable adhesive composed of a thermoplastic polyester resin and an epoxy resin (C3, L5-15). Many epoxy resins are disclosed, inter alia, Araldite ® 6010, Epon ® 825 etc. (C4, L60-C5, L45), which are same as those listed as equivalent epoxy candidates in the instant spec on pages 5 and 6. The polyester resin is disclosed as being a copolyester (C5, L45-C6, L35).

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Feichtmeier et al. does not disclose using a copolyester in its thermosettable adhesive with the instantly claimed properties.

Kelch et al. discloses using GRILTEX ® 9 copolyester in an hot melt adhesive layer because of its advantageous rheological properties, inter alia, low melt viscosities ([0027]-[0030]). From the instant specification (Example 1, page 9), the GRILTEX ® 9 copolyester used with the epoxy resins of Feichtmeier et al. would produce an adhesive with the instant claimed properties.

The inventions of both Feichtmeier et al. and Kelch et al. are drawn to the field of thermosetting adhesives and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the adhesive composition of Feichtmeier et al. by using the GRILTEX ® 9 copolyester as taught by Kelch et al. for the purposes of imparting improved rheological properties.

The modified teachings of Feichtmeier et al. (i.e. using GRILTEX ® 9 as the copolyester) read on the instant claimed rheological properties in that modified Feichtmeier et al. has GRILTEX ® 9 copolyester and the epoxy equivalents of EPR 0191 at weight ratios (30% to 80% polyester and 5 to 80% epoxy, C3, L10-20) which overlap the weight ratio as disclosed in Example 1 (instant specification, page 9), which possesses the instant claimed rheological properties.

Modified Feichtmeier et al. does not explicitly disclose the specific rheological properties of the adhesive sheet as in instant claim 1. However, in light of the substantially identical adhesive composition as taught by modified Feichtmeier et al. with the instant adhesive composition from the example in the claims, it will possess the claimed properties, absent any

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objective evidence to the contrary. See MPEP 2112 (In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980)).

The adhesive of modified Feichtmeier et al. is “heat-activable” in the sense that it can be melted for application to the desired substrate and it is also considered “heat-activable” in the sense that it can be thermoset at a higher temperature (Examples 1-7, C18, L50-C20). This combined thermal effect is achieved through a combination of thermosetting polymers (C3, L35-45) and thermoformable polymers (C3, L45-60). Either of these polymers (thermosetting or thermoformable) would be considered “heat activable.”

Regarding claims 3 and 4, modified Feichtmeier et al. discloses all of the limitations as set forth above. Additionally the Feichtmeier et al. discloses a thermosettable adhesive composed of a copolyester resin (C5, L45-C6, L35) and an epoxy resin (C4, L60-C5, L45).

Regarding claim 7, Feichtmeier et al. discloses a thermosettable adhesive composed of a thermoplastic polyester resin and an epoxy resin at (C3, L5-15). Many epoxy resins are disclosed, inter alia, Araldite ® 6010, Epon ® 825 etc. (C4, L60-C5, L45), which are of the same as those listed as equivalent epoxy candidates in the instant spec on pages 5 and 6. The polyester resin is disclosed as being a copolyester (C5, L45-C6, L35). Feichtmeier et al. also discloses that the adhesive layer be used with a release film as a tape (C13, L20-35).

Feichtmeier et al. does not disclose using GRILTEX ® 9 copolyester in its thermosettable adhesive.

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Kelch et al. discloses using GRILTEX ® 9 copolyester in an hot melt adhesive layer because of its advantageous rheological properties, inter alia, low melt viscosities ([0027]-[0030]).

The inventions of both Feichtmeier et al. and Kelch et al. are drawn to the field of thermosetting adhesives and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the adhesive composition of Feichtmeier et al. by using the GRILTEX ® 9 copolyester as taught by Kelch et al. for the purposes of imparting improved rheological properties.

The modified teachings of Feichtmeier et al. (i.e. using GRILTEX ® 9 as the copolyester) read on the instant claimed rheological properties in that modified Feichtmeier et al. has GRILTEX ® 9 copolyester and the epoxy equivalents of EPR 0191 at weight ratios (30% to 80% polyester and 5 to 80% epoxy, C3, L10-20) which overlap the weight ratio as disclosed in Example 1 (instant specification, page 9), which possesses the instant claimed rheological properties.

Modified Feichtmeier et al. does not explicitly disclose the specific rheological properties of the adhesive sheet as in instant claim 1. However, in light of the substantially identical adhesive composition as taught by modified Feichtmeier et al. with the instant adhesive composition from the example in the claims, it will possess the claimed properties, absent any objective evidence to the contrary. See MPEP 2112 (In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980)).

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8. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feichtmeier et al. (U.S. 6,350,791) in view of Kelch et al. (U.S. 2002/0068182), and further in view of Vieilledent (U.S. 4,701,236).

Regarding claims 2 and 8, modified Feichtmeier et al. discloses all of the limitations as set forth above.

Modified Feichtmeier et al. does not disclose that the thickness of the film be between 10 and 100 or 20 and 80 micrometers.

Vieilledent discloses a adhesive for use with chips and cards with a thickness of 50 micrometers, which exemplifies the instant claimed ranges (C4, L40-56).

The inventions of both modified Feichtmeier et al. and Vielledent are drawn to the field of adhesives and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the adhesive of modified Feichtmeier et al. by using the thickness as taught by Vielledent for the purposes of using the adhesive in a way that would adequately secure a chip to a card.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feichtmeier et al. (U.S. 6,350,791) in view of Kelch et al. (U.S. 2002/0068182), and further in view of Haghiri-Tehrani (U.S. 4,897,534).

Regarding claims 5 and 6, modified Feichtmeier et al. discloses all of the limitations as set forth above.

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Modified Feichtmeier et al. does not disclose a method of using the adhesive to secure a chip to a card.

Haghiri-Tehrani discloses a method of using the adhesive to secure a chip to a card, wherein the card is a polyimide (C1, L20-30) and the chip module is PVC (C3, L35-45).

The inventions of both modified Feichtmeier et al. and Haghiri-Tehrani are drawn to the field of adhesives and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have used the adhesive of modified Feichtmeier et al. for securing chips to cards as taught by Haghiri-Tehrani for the purposes of applying the invention to more marketable fields.

#### ***Response to Arguments***

10. Applicant's arguments filed on 9/11/09 are considered moot in light of the rejections above which were necessitated by applicant's amendments. Arguments which are still deemed relevant are addressed below.

11. Regarding applicant's arguments that the overall composition of Kelch would not be suited for their adhesive, the examiner maintains that the entire composition of Kelch is not being combined with Feichtmeier. Rather, one specific copolyester having specific melting properties used in Kelch is being used in the manner prescribed called for by Feichtmeier for the adhesive composition of Feichtmeier. Kelch is only relevant in that it shows that the GRILTEX 9 copolyester meets the requirements called for by Feichtmeier (melting point) and was known for use in adhesive compositions in general and would therefore be an obvious specific example of the non-specific copolyesters called for in Feichtmeier.

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12. Applicant then argues that GRILTEX 9 is not "heat activated." First, the examiner notes that the instant claimed limitation is for "heat-activable" not "activated." Second, the term heat activated, assuming that is what the applicant intends "heat activable" to mean, is generally considered by one having ordinary skill in the art to relate to thermosetting polymers in that the heat activates the curing reaction. This runs counter to applicant's arguments that the term means thermoforming and is the crux of the 112 2<sup>nd</sup> paragraph rejection. Given the broadest reasonable interpretation the term will be taken to encompass either thermosetting or thermoplastic properties and under either of these interpretations the prior art still reads on the claims. The GRILTEX 9 copolyester is thermoplastic [0030]. The general copolyester that it is being used for in Feichtmeier is mentioned as being thermoformable (i.e. thermoplastic) (C5, L45-60). In general, one having ordinary skill in the art would recognize that copolyesters are thermoplastic. Moreover, it is not claimed that any particular ingredient in the adhesive composition is thermo-activable but rather that the whole adhesive is thermoactivable. Hence applicant's arguments that GRILTEX 9 is not thermoplastic or thermo-activable are incorrect, and even if they were correct, they would be considered moot.

13. Applicant argues that their adhesive is thermoplastic, not thermosetting. This runs counter to the "heat activable" term which is understood to mean thermosetting. Thermosetting or thermoplastic are not mentioned in the claims. Even so, the adhesive of modified Feichtmeier is both thermoplastic (in that it can be melted and applied to a substrate due to the inclusion of the thermoformable copolyester) and thermosetting (in that it can be set at a higher temperature after it has been applied). This dual functionality is expressed at C5, L55-58, where Feichtmeier discloses that the thermoformable component should melt at a temperature less than

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the temperature for thermo-hardening. Hence the prior art reads on the heat-activable term regardless of whether it means thermosetting or thermoplastic.

14. Applicant argues that there is no motivation to supply a thermoplastic polymer (GRILTEX 9) for the thermosetting composition of Feichtmeier. This is incorrect. Feichtmeier actually calls for a thermoformable copolyester (C5, L45-60) of the same type as GRILTEX 9 for the purposes of making the adhesive thermoformable below the hardening temperature.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/MN/  
10/27/09